

Storm Data and Unusual Weather Phenomena

January 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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INDIANA, Northeast

INZ003>004-014>015

La Porte - St. Joseph - Marshall - Fulton

20 0100EST
21 1600EST

0 0 0

Heavy Snow

Storm total snow amounts ranged from 6 to 10 inches across Fulton and Marshall counties with most of it falling from lake effect snow bands on the 20th. Laporte county totals ranged from 6 to 12 inches across the eastern third of Laporte county. A storm total of 12.5 inches of snow fell at the South Bend Airport with 9.3 inches attributed to lake effect.

...Synoptic and mesoscale conditions on the 20th/21st...

The coldest air of the season dropped into the midwest on the 20th behind a vigorous low pressure system which developed across the central plains on the 19th. The system tracked across central Indiana the night of the 19th dropping 4-6 inches of synoptic induced snowfall. As the system pulled east... deep northerly cyclonic flow developed in its wake as very cold air poured into the region. With the northerly fetch down along the long axis of Lake Michigan... a tremendous shore parallel snow band developed in the early morning hours of the 20th. Many locations under this snow band reported snowfall rates of 2 to 3 inches per hour with whiteout conditions. This band broke up by late afternoon on the 20th with the eventual development of multiple and not as intense lake effect snow bands which developed in response to even colder air spilling south out of Canada. General lake effect snowfall ranged from 6 to 10 inches with Baroda Michigan reporting the heaviest amount of 15 inches.

INZ003>004

La Porte - St. Joseph

25 1600EST
26 1200EST

0 0 0

Heavy Snow

18-20 inches of snow fell in Michigan City and Laporte with most other locations across Laporte county reporting in excess of 1 foot. Many roads were closed due to the heavy snow and whiteout conditions the night of the 25th into the mid morning hours of the 26th. 9 inches of lake effect snow fell at the South Bend Airport with up to 12 inches along the St. Joseph/Laporte county line. Locations east of South Bend reported only an inch.

...Synoptic and mesoscale conditions on the 25th/26th...

A tremendous snowstorm was ongoing along the east coast during this period with a large nearly meridional longwave upper level trough in place across the upper midwest. A clipper type low pressure system rapidly dove southeast out of Alberta Canada early on the 25th spreading a band of light snow across Northern Indiana. Quick on its heels was a 1040 millibar arctic high. This combined with intensifying cold advection and induced thermal troughing along the lake and initial boundary layer wind trajectory of 360 degrees... led once again to a very intense shore parallel snowband to develop along the Lake Michigan shoreline during the late afternoon of the 25th reaching as far south as Lafayette Indiana. This band remained in roughly the same position for 12 hours before shifting westward into Lake and Porter counties the morning of the 26th. Many locations from western Berrien county into Laporte county reported from 14 to 20 inches of snow with the heaviest snowfall occurring in Michigan City and Laporte.

MICHIGAN, Extreme Southwest

MIZ077>078

Berrien - Cass

20 0100EST
21 1600EST

0 0 0

Heavy Snow

Storm total snow amounts across Berrien county ranged from 8 to 15 inches with 15 inches reported at Baroda. Storm total snow amounts ranged from 6 to 9 inches across Cass county with the heaviest snow falling along the Cass/Berrien county line on the 20th.

...Synoptic and mesoscale conditions on the 20th/21st...

The coldest air of the season dropped into the midwest on the 20th behind a vigorous low pressure system which developed across the central plains on the 19th. The system tracked across central Indiana the night of the 19th dropping 4-6 inches of synoptic induced snowfall. As the system pulled east... deep northerly cyclonic flow developed in its wake as very cold air poured into the region. With the northerly fetch down along the long axis of Lake Michigan... a tremendous shore parallel snow band developed in the early morning hours of the 20th. Many locations under this snow band reported snowfall rates of 2 to 3 inches per hour with whiteout conditions. This band broke up by late afternoon on the 20th with the eventual development of multiple and not as intense lake effect snow bands which developed in response to even colder air spilling south out of Canada. General lake effect snowfall ranged from 6 to 10 inches with Baroda Michigan reporting the heaviest amount of 15 inches.

MIZ077

Berrien

25 1800EST
26 0800EST

0 0 0

Heavy Snow

Storm total snow amounts ranged from 2 inches in Niles to 16 inches in Baroda and Michiana and points west and southwest as the most intense snow bands hugged the Lake Michigan shoreline before shifting westward the morning of the 26th.

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MICHIGAN, Extreme Southwest

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A tremendous snowstorm was ongoing along the east coast during this period with a large nearly meridional longwave upper level trough in place across the upper midwest. A clipper type low pressure system rapidly dove southeast out of Alberta Canada early on the 25th spreading a band of light snow across Northern Indiana. Quick on its heels was a 1040 millibar arctic high. This combined with intensifying cold advection and induced thermal troughing along the lake and initial boundary layer wind trajectory of 360 degrees... led once again to a very intense shore parallel snowband to develop along the Lake Michigan shoreline during the late afternoon of the 25th reaching as far south as Lafayette Indiana. This band remained in roughly the same position for 12 hours before shifting westward into Lake and Porter counties the morning of the 26th. Many locations from western Berrien county into Laporte county reported from 14 to 20 inches of snow with the heaviest snowfall occurring in Michigan City and Laporte.

INDIANA, Northeast

INZ018-023>027-032>034 Allen - Miami - Wabash - Huntington - Wells - Adams - Grant - Blackford - Jay

11	1600EST	0	0	0	Heavy Snow
12	0000EST				

...Synoptic and mesoscale conditions on March 11th...

A strong shortwave trough was located over the central plains the evening of the 10th with surface low pressure developing over the lower Mississippi valley. As this system moved northeast on the 11th... it rapidly intensified spreading a developing swath of heavy snow across the midwest with some locations reporting thundersnow in the developing deformation zone north of the amplifying upper trough.

As a result... the biggest snowstorm of the season thus ensued across the southeastern third of the county warning area during the late afternoon and evening hours of the 11th. Most locations reported from 6 to 8 inches of snow with many locations reporting snowfall rates of 1-2 inches per hour during the height of the storm with the Fort Wayne airport reporting 4 inches of snow in just 2 hours and a total of 8.8 inches for the event. The heavy, wet nature of the snow caused numerous accidents including some multiple vehicle accidents in Wells and Allen counties.

MICHIGAN, Extreme Southwest

Cass County

4 N Dowagiac

15	2000EST	0	1	10K	Thunderstorm Wind
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A strong thunderstorm microburst blew down trees, branches, and windows out of a house. A woman at the residence at the time was outside when the storm hit and suffered minor injuries from the blown debris.

OHIO, Northwest

OHZ001>002-004>005-
015>016-024>025

Williams - Fulton - Defiance - Henry - Paulding - Putnam - Van Wert - Allen

11	1600EST	0	0	Heavy Snow
12	0000EST			

...Synoptic and mesoscale conditions on March 11th...

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Storm Data and Unusual Weather Phenomena

April 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Property		Character of Storm
					Killed	Injured				
INDIANA, Northeast										
Fulton County Rochester	07	1453EST			0	0				Hail (0.75)
Whitley County Larwill	07	1519EST			0	0				Hail (0.75)
Allen County Grabill	07	1600EST			0	0				Hail (0.88)
Whitley County Columbia City	20	0615EST			0	0				Hail (0.75)
White County Brookston	20	1115EST			0	0				Hail (1.75)
White County Reynolds	20	1115EST			0	0				Hail (0.75)
White County Brookston	20	1122EST			0	0				Hail (0.75)
White County Brookston	20	1122EST			0	0				Hail (1.00)
Fulton County Rochester	20	1145EST			0	0				Hail (1.00)
St. Joseph County South Bend	20	1148EST			0	0				Hail (1.50)
St. Joseph County Mishawaka	20	1150EST			0	0				Hail (0.75)
St. Joseph County South Bend	20	1150EST			0	0				Hail (0.75)
Elkhart County (Ekm)Elkhart Muni Ar	20	1156EST			0	0				Hail (1.00)
St. Joseph County Mishawaka	20	1156EST			0	0				Hail (1.00)
St. Joseph County Osceola	20	1156EST			0	0				Hail (1.00)
Miami County Mexico	20	1214EST			0	0				Hail (0.75)
Kosciusko County Silver Lake	20	1230EST			0	0				Hail (0.88)
Kosciusko County Winona Lake	20	1243EST			0	0				Hail (0.88)
Kosciusko County North Webster	20	1245EST			0	0				Hail (0.88)
Noble County Wolf Lake	20	1253EST			0	0				Hail (1.75)
Lagrange County South Milford	20	1316EST			0	0				Hail (0.75)
Noble County Wolcottville	20	1316EST			0	0				Hail (0.75)

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INDIANA, Northeast

Noble County Kendallville	20	1326EST			0	0			Hail (0.75)
Steuben County Countywide	20	1340EST			0	0	0		Thunderstorm Wind
Large tree limbs downed throughout county.									
De Kalb County St Joe	20	1345EST			0	0	0		Thunderstorm Wind
Trees down.									
Jay County Countywide	20	1630EST			0	0	10K		Thunderstorm Wind
Roof damage. Power lines and trees downed.									

Synoptic and mesoscale conditions for April 20, 2000. . .

A significant mid-latitude cyclone developed over the midwest on the 19th and 20th. A strong mid-level jet at 75 knots combined with a 40 knot low-level jet triggered rapid severe storm development across central and northern Illinois during the morning hours of the 20th. Storms quickly organized into a squall line with several embedded bows which then tracked across northern Indiana and northwest Ohio. Reports of damaging winds and large hail were common with the storms during the afternoon of the 20th.

MICHIGAN, Extreme Southwest

Hillsdale County Montgomery	20	1348EST			0	0			Hail (0.75)
Hillsdale County Somerset	20	1409EST			0	0			Hail (0.75)

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OHIO, Northwest

Putnam County Leipsic	20	1600EST			0	0	0		Thunderstorm Wind
Minor roof damage. Trees downed.									
Allen County Lima	20	1725EST			0	0	0		Thunderstorm Wind
Power lines and tree lines downed. Time estimated.									
Henry County Hamler	20	2000EST			0	0	0		Urban/Sml Stream Fld
Minor street flooding.									
Henry County Holgate	20	2000EST			0	0	0		Urban/Sml Stream Fld
Minor street flooding.									
Putnam County Continental	20	2000EST			0	0	0		Urban/Sml Stream Fld
Minor street flooding.									
Henry County Holgate	20	2000EST			0	0	0		Urban/Sml Stream Fld

Storm Data and Unusual Weather Phenomena

April 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

OHIO, Northwest

School's creek out of banks forced evacuation of 2 dozen homes.

Paulding County Countywide

20 2000EST **0 0 0** **Urban/Sml Stream Fld**
SR 613 . . . CR 209 and CR 140 flooded in spots.

Synoptic and Mesoscale conditions for April 20, 2000. . .

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INDIANA, Northeast									
Starke County Knox	09	0015EST			0	0	0		Thunderstorm Wind
	Trees down.								
Starke County Winona	09	0015EST			0	0	0		Thunderstorm Wind
	Trees down.								
La Porte County Michigan City	09	0017EST			0	0			Thunderstorm Wind (G52)
La Porte County Michigan City	09	0025EST			0	0	0		Thunderstorm Wind
	Numerous trees and power lines downed.								
Marshall County Plymouth	09	0045EST			0	0	0		Thunderstorm Wind
	Trees down just west of Plymouth.								
La Porte County Michigan City	09	0015EST			0	0	10K		Thunderstorm Wind
	Trees downed on cars and houses. A roof was ripped off of a gas station.								
La Porte County Michigan City	09	0025EST			0	0	5K		Lightning
	A house caught on fire when a pole was struck by lightning, cutting the power lines and causing them to land along the basement wall.								
La Porte County La Porte Arpt	09	1500EST			0	0			Thunderstorm Wind (G65)
	Time estimated.								
Wabash County Countywide	09	1700EST			0	0	10K		Thunderstorm Wind
	24 inch diameter tree was uprooted. Several vehicles and two or three houses were damaged by fallen trees.								
Fulton County Rochester	09	0100EST			0	0	0		Thunderstorm Wind
	Power lines down.								
Kosciusko County Silver Lake	09	0105EST			0	0	0		Thunderstorm Wind
	Tree down.								
Elkhart County Elkhart	09	0110EST			0	0	0		Thunderstorm Wind
	Trees down.								
Kosciusko County Winona Lake to Central Portion	09	0110EST			0	0	0		Thunderstorm Wind
	Tree down.								
Kosciusko County North Webster	09	0115EST			0	0	0		Thunderstorm Wind
	Large limbs down.								
St. Joseph County Osceola	09	0100EST			0	0	100K		Lightning
	A power line down caused by lightning set a church on fire.								
St. Joseph County South Bend	09	0100EST			0	0	10K		Thunderstorm Wind
	Trees down on homes. Power lines down.								

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INDIANA, Northeast									
Elkhart County									
Elkhart	09	1715EST			0	0	5K		Thunderstorm Wind
									Roof damage. Tree fell on car. Many trees and power lines down.
Elkhart County									
Wakarusa	09	1730EST			0	0	0		Thunderstorm Wind
									80-foot pine downed. Numerous power lines and trees downed.
Lagrange County									
Shipshewana	09	0125EST			0	0	0		Thunderstorm Wind
									Trees down.
Lagrange County									
Lagrange	09	0130EST			0	0	0		Thunderstorm Wind
									Large limbs down.
Wabash County									
La Fontaine	09	0615EST			0	0			Hail (0.75)
White County									
Wolcott	09	1610EST			0	0	0		Thunderstorm Wind
									Minor wind damage.
Starke County									
North Judson	09	1630EST			0	0	0		Thunderstorm Wind
									Trees down.
Pulaski County									
Winamac	09	1630EST			0	0	10K		Thunderstorm Wind
									Trees down. Large limbs on cars. Minor roof damage to church.
Wabash County									
North Manchester	09	1635EST			0	0			Hail (1.00)
Starke County									
Koontz Lake	09	1643EST			0	0	0		Thunderstorm Wind
									Minor wind damage.
Fulton County									
Leiters Ford	09	1650EST			0	0	0		Thunderstorm Wind
									Trees downed across roads.
St. Joseph County									
North Liberty	09	1700EST			0	0	0		Thunderstorm Wind (G57)
Cass County									
Logansport	09	1645EST			0	0	30K		Thunderstorm Wind
									Barn destroyed. Trees down on cars and homes. Power lines down.
Whitley County									
Countywide	09	1700EST			0	0	1M		Thunderstorm Wind
									Numerous trees down on houses and cars. A South Whitley factory had its roof blown off and the Tranter Printing building lost its roof which crashed into a vehicle destroying it. Several homes sustained damage from fallen trees with many power lines blown down across town.
Marshall County									
Culver	09	1710EST			0	0			Thunderstorm Wind (G52)
Grant County									
Marion	09	1740EST			0	0	0		Thunderstorm Wind (G61)
									Minor wind damage.
Miami County									
Peru	09	1740EST			0	0	0		Thunderstorm Wind
									Construction trailer overturned and 6 inch tree limbs down.

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INDIANA, Northeast									
Adams County Decatur	09	1742EST			0	0			Hail (0.75)
Allen County Zanesville	09	1747EST			0	0	0		Thunderstorm Wind
		Tree down on W County Line Rd							
Noble County Albion	09	1711EST			0	0			Hail (1.00)
Wabash County North Manchester	09	1711EST			0	0	0		Thunderstorm Wind
		Minor wind damage.							
Whitley County Etna	09	1711EST			0	0			Hail (1.75)
Whitley County Lorane	09	1711EST			0	0			Hail (1.75)
Whitley County South Whitley	09	1711EST			0	0			Hail (0.75)
Noble County Wolf Lake	09	1715EST			0	0			Hail (1.75)
Elkhart County Elkhart	09	1718EST			0	0			Thunderstorm Wind (G73)
Kosciusko County Warsaw	09	1720EST			0	0			Hail (0.75)
Noble County Merriam	09	1727EST			0	0	0		Thunderstorm Wind
		Minor structural damage to a residential area.							
Wabash County North Manchester	09	1730EST			0	0			Hail (0.75)
Grant County Marion	09	1740EST			0	0			Hail (0.88)
Noble County Merriam	09	1745EST			0	0			Hail (1.75)
Huntington County Markle	09	1751EST			0	0	0		Thunderstorm Wind
		Minor wind damage.							
Steuben County Ashley	09	1751EST			0	0			Hail (1.75)
De Kalb County Auburn	09	1755EST			0	0	0		Thunderstorm Wind
		Trees and power lines down.							
Allen County Ellison	09	1758EST			0	0	0		Thunderstorm Wind
		1 1/2 foot diameter trees down.							
Allen County Huntertown	09	1800EST			0	2	3M		Thunderstorm Wind
		Numerous trees and power lines down within a 5 by 6 block area on the western side of Huntertown. Several buildings damaged...including two businesses and one home which were destroyed. An additional 21 homes sustained minor to moderate damage. State of emergency declared.							

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INDIANA, Northeast									
Wells County Craigville	09	1800EST			0	0			Hail (0.75)
Allen County Aboite	09	1801EST			0	0	0		Thunderstorm Wind
			18 inch diameter tree down and 8 inch limbs down.						
De Kalb County Auburn	09	1803EST			0	0			Hail (1.75)
Grant County Marion	09	1800EST			0	0	1K		Thunderstorm Wind
			Trees blown down and brick wall blown onto a car.						
Adams County Decatur	09	1805EST			0	0	0		Thunderstorm Wind
			Trees down.						
Allen County Huntertown	09	1805EST			0	0			Thunderstorm Wind (G61)
Steuben County Angola	09	1805EST			0	0			Hail (1.00)
Allen County Georgetown	09	1806EST			0	0	0		Thunderstorm Wind
			Large limbs down near Georgetown Shopping Center.						
Lagrange County Lagrange	09	1808EST			0	0	10K		Thunderstorm Wind
			Barn destroyed. Trees and power lines down.						
Allen County Ft Wayne to Hoagland	09	1809EST			0	0			Hail (0.75)
Allen County Ft Wayne	09	1810EST			0	7	1M		Thunderstorm Wind
			Numerous large trees and power lines blown down across town. The high winds destroyed the Builder's Square building which was under construction. A house along Wildwood avenue was heavily damaged when a large tree fell onto it and injured 6 people inside. Several vehicles also sustained minor to major damage from the fallen trees and limbs.						
De Kalb County Spencerville	09	1810EST			0	0			Thunderstorm Wind (G61)
Allen County New Haven	09	1811EST			0	0			Hail (0.75)
Allen County Zanesville	09	1812EST			0	0	20K		Thunderstorm Wind
			18-24 inch diameter tree down on house						
Blackford County Hartford City	09	1815EST			0	0	20K		Thunderstorm Wind
			Three homes damaged by fallen trees. Many other trees down.						
Adams County 3 SW Decatur	09	1830EST			0	0	15K		Thunderstorm Wind
			A travel trailer overturned and two barns destroyed.						
Allen County Zanesville	09	1822EST			0	0	20K		Thunderstorm Wind
			Greenhouse with aluminum frame heavily damaged. 2-3 ft diameter tree down on house. Structural damage.						

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INDIANA, Northeast

Adams County
Monroe **09** **1825EST** **0** **0** **0** **Thunderstorm Wind**
Trees down between Bern and Monroe.

Adams County
Decatur **09** **1840EST** **0** **0** **0** **Thunderstorm Wind**
Trees down on power lines.

Allen County
Ft Wayne **09** **1841EST** **0** **0** **0** **Thunderstorm Wind**
Telephone pole snapped.

Whitley County
Columbia City **09** **1842EST** **0** **0** **0** **Thunderstorm Wind**
6 inch diameter tree down over telephone lines.

Whitley County
Lorane **09** **1846EST** **0** **0** **10K** **Thunderstorm Wind**
7 inch diameter tree down on house.

Synoptic and mesoscale conditions during the afternoon of the 9th...

A significant mid-level shortwave trough extended through the Mississippi valley during the afternoon with a deepening surface low over northeast Illinois. Much of northern Indiana was in the warm sector with surface based CAPE of 2500 J/kg and increasing deep layer shear in advance of a 70 knot mid-level jet max ahead of the mid-level shortwave.

A prefrontal squall line quickly developed late in the afternoon along the Illinois/Indiana state line. Additional isolated supercells developed in advance of this line and were mainly responsible for the swath of large hail from Wabash to Steuben counties. The squall line gradually organized into a large bow echo with the apex of the bow tracking from southwest Whitley county eastward through northern Allen and into western Defiance county in Ohio where the greatest widespread wind damage was observed.

Starke County
San Pierre **12** **1807EST** **0** **0** **Hail (0.75)**

Starke County
1 N North Judson **12** **1818EST** **0** **0** **Hail (1.00)**

Starke County
North Judson **12** **1818EST** **0** **0** **Hail (0.75)**

Pulaski County
4 W Beardstown **12** **1821EST** **0** **0** **Thunderstorm Wind (G52)**

Pulaski County
Medaryville **12** **1824EST** **0** **0** **Hail (1.00)**

Starke County
6 W Bass Lake **12** **1825EST** **0** **0** **Hail (1.50)**

Pulaski County
2 N Beardstown **12** **1844EST** **0** **0** **Hail (1.00)**

Marshall County
Bourbon **12** **1857EST** **0** **0** **0** **Thunderstorm Wind**
Tree down.

Marshall County
Argos **12** **1905EST** **0** **0** **Hail (1.75)**

Kosciusko County
2 N Atwood **12** **1921EST** **0** **0** **Hail (1.75)**

Fulton County
3 N Rochester **12** **1928EST** **0** **0** **Hail (0.75)**

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INDIANA, Northeast									
Kosciusko County 2 N Pierceton	12	1950EST			0	0			Hail (0.88)
St. Joseph County Mishawaka	12	2055EST			0	0	0		Thunderstorm Wind
		Power lines down.							
Grant County 1 N Swayzee	18	1420EST			0	0			Hail (0.88)
Grant County Gas City	18	1428EST			0	0			Hail (1.00)
Pulaski County 1 N Medaryville	18	1940EST			0	0	0		Thunderstorm Wind
		Few trees and power lines down.							
Starke County Knox	18	1950EST			0	0			Hail (0.75)
Fulton County 3 N Delong	18	2005EST			0	0			Hail (1.00)
Kosciusko County Etna Green	18	2030EST			0	0	0		Thunderstorm Wind
		Few trees down on power lines.							
Fulton County Rochester	18	2035EST			0	0			Hail (1.75)
Miami County Peru	18	2125EST			0	0			Hail (1.00)
Allen County Ft Wayne	18	2145EST			0	0	0		Thunderstorm Wind
		Numerous trees and power lines down on the north side of Fort Wayne.							
Wabash County 1 SW Wabash	18	2145EST			0	0			Hail (0.75)
Kosciusko County Claypool	18	2030EST			0	0	0		Thunderstorm Wind
		Few trees down on power lines.							
Kosciusko County Silver Lake	18	2030EST			0	0	0		Thunderstorm Wind
		Few trees down on power lines.							
Whitley County Collins	18	2142EST			0	0	0		Thunderstorm Wind
		Several small trees down along the Whitley/Allen County line.							
Allen County Ft Wayne	18	2150EST			0	0	5K		Thunderstorm Wind
		Trees and power lines down in Royal Oak subdivision. Some limbs through roofs.							
Huntington County Huntington	18	2150EST			0	0			Hail (0.75)
Wabash County 1 S Wabash	18	2150EST			0	0			Hail (0.88)
Allen County Aboite	22	1645EST			0	0			Hail (0.75)

Storm Data and Unusual Weather Phenomena

May 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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INDIANA, Northeast

White County 6 S Wolcott	31	1555EST			0	0			Hail (0.75)
White County 6 S Wolcott	31	1555EST			0	0			Thunderstorm Wind (G57)
Cass County Countywide	31	1630EST			0	0	10K		Thunderstorm Wind Wind damage in southern half of county. Numerous trees and power lines down. Several houses with damage from fallen trees. Travel trailer blown down.
Miami County 3 WSW Bunker Hill	31	1645EST			0	0			Thunderstorm Wind (G57)
Miami County 2 S Grissom Afb	31	1658EST			0	0			Thunderstorm Wind (G52)
Grant County 5 W Fairmount	31	1710EST			0	0	0		Thunderstorm Wind Power lines down. 4 inch diameter tree down.
Miami County Grissom Afb	31	1720EST			0	0	0		Thunderstorm Wind Construction trailer blown down and power lines down.
Grant County Marion	31	1722EST			0	0	5K		Thunderstorm Wind Tree down on car.
Blackford County Roll	31	1735EST			0	0			Hail (0.75)
Blackford County Millgrove	31	1745EST			0	0	0		Thunderstorm Wind Trees and power lines down.
Jay County Portland	31	1754EST			0	0	1K		Thunderstorm Wind Tree down on a car.

MICHIGAN, Extreme Southwest

Berrien County Galien	09	0025EST			0	0	0		Thunderstorm Wind Numerous trees and power lines down.
Berrien County New Buffalo	09	0025EST			0	0	0		Thunderstorm Wind Numerous trees and power lines down.
Cass County Cassopolis	09	0110EST			0	0	0		Thunderstorm Wind Trees down.
Cass County Marcellus	09	0115EST			0	0	0		Thunderstorm Wind Trees down.
St. Joseph County Constantine	09	0115EST			0	0	0		Thunderstorm Wind Power lines and numerous trees down.

Storm Data and Unusual Weather Phenomena

May 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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MICHIGAN, Extreme Southwest

Branch County Union City	09	0130EST			0	0	0		Thunderstorm Wind
			Numerous trees down.						
Berrien County Niles	09	1650EST			0	0	0		Thunderstorm Wind
			Power pole and street light down.						
Cass County Marcellus	09	1700EST			0	0			Hail (2.75)
Berrien County Niles	09	1710EST			0	0	0		Thunderstorm Wind
			Trees down at Library and at Hannah Rd. and Morris Dr.						
St. Joseph County Three Rivers	09	1716EST			0	0			Hail (1.75)
Hillsdale County Countywide	09	1845EST			0	0	0		Thunderstorm Wind
			Numerous trees down.						
Hillsdale County Hillsdale	09	1845EST			0	0			Hail (0.75)
Hillsdale County Hillsdale	09	1845EST			0	0	10K		Thunderstorm Wind
			Barn blown down. Numerous trees down.						

Synoptic and mesoscale conditions during the afternoon of the 9th...

A significant mid-level shortwave trough extended through the Mississippi valley during the afternoon with a deepening surface low over northeast Illinois. Much of northern Indiana and southern Michigan were in the warm sector with surface based CAPE of 2500 J/kg and increasing deep layer shear in advance of a 70 knot mid-level jet max ahead of the mid-level shortwave.

A prefrontal squall line quickly developed late in the afternoon along the Illinois/Indiana state line. Additional isolated supercells developed in advance of this line and were mainly responsible for the swath of large hail from Wabash to Steuben counties. The squall line gradually organized into a large bow echo with the apex of the bow tracking from southwest Whitley county eastward through northern Allen and into western Defiance county in Ohio where the greatest widespread wind damage was observed.

Branch County Coldwater	18	1340EST			0	0			Hail (0.75)
Branch County 1 N Coldwater	18	1345EST			0	0			Hail (0.75)
Branch County 2 N Coldwater	18	1345EST			0	0			Hail (2.00)
Berrien County St Joseph	18	2050EST			0	0	0		Thunderstorm Wind
			Many tree limbs down and power lines down.						

OHIO, Northwest

Henry County Malinta	09	1508EST			0	0			Hail (1.00)
Henry County Deshler	09	1553EST			0	0			Hail (1.00)
Van Wert County Van Wert	09	1800EST			0	0			Hail (1.00)

Storm Data and Unusual Weather Phenomena

May 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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OHIO, Northwest

Williams County Montpelier	09	1810EST			0	0	40K		Thunderstorm Wind
		Mobile home destroyed.							
Paulding County Antwerp	09	1821EST			0	0	0		Thunderstorm Wind
		Large tree limbs down.							
Henry County Ridgeville Corners	09	1840EST			0	0	0		Thunderstorm Wind
		Minor wind damage.							
Van Wert County Convoy	09	1840EST			0	0			Hail (0.75)
Van Wert County Van Wert	09	1841EST			0	0			Hail (1.00)
Fulton County Wauseon	09	1850EST			0	0	20K		Thunderstorm Wind
		Numerous trees blown down. Barns damaged. Roof damage to businesses in town.							
Putnam County Cloverdale	09	1850EST			0	0			Thunderstorm Wind (G61)
Putnam County Cloverdale	09	1850EST			0	0			Hail (1.50)
Allen County Delphos	09	1910EST			0	0	0		Thunderstorm Wind
		Trees down.							

Synoptic and mesoscale conditions during the afternoon of the 9th...

A significant mid-level shortwave trough extended through the Mississippi valley during the afternoon with a deepening surface low over northeast Illinois. Northwest Ohio was in the warm sector with surface based CAPE of 2500 J/kg and increasing deep layer shear in advance of a 70 knot mid-level jet max ahead of the mid-level shortwave.

A prefrontal squall line quickly developed late in the afternoon along the Illinois/Indiana state line. Additional isolated supercells developed in advance of this line and were mainly responsible for the swath of large hail from Wabash to Steuben counties. The squall line gradually organized into a large bow echo with the apex of the bow tracking from southwest Whitley county eastward through northern Allen and into western Defiance county in Ohio where the greatest widespread wind damage was observed. A bow echo/supercell merger occurred over northwest Williams county causing extensive damage in Montpelier and Columbia.

Paulding County 2 SW Paulding	18	2230EST			0	0	0		Thunderstorm Wind
		A car was blown off the road on SR500 in between Paulding and Payne.							
Paulding County Paulding	18	2230EST			0	0	0		Thunderstorm Wind
		2 to 3 trees blown down. 1 on top of a car.							

Storm Data and Unusual Weather Phenomena

June 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
INDIANA, Northeast									
Wabash County 3 S North Manchester	10	1730EST			0	0	0		Thunderstorm Wind
			Trees and power lines down.						
St. Joseph County South Bend	13	1044EST			0	0			Thunderstorm Wind (G56)
			South side of town near Ireland Rd.						
St. Joseph County South Bend	13	1045EST			0	0	5K		Thunderstorm Wind
			Two trees down on a parked car and a house.						
St. Joseph County Mishawaka	13	1051EST			0	0			Thunderstorm Wind (G60)
			North side of town.						
St. Joseph County Mishawaka	13	1100EST			0	0	0		Thunderstorm Wind
			Trees down.						
Fulton County Rochester	13	1345EST			0	0	0		Thunderstorm Wind
			Trees down.						
Huntington County Roanoke	13	1505EST			0	0	0		Thunderstorm Wind
			Tree down and limbs down.						
Adams County 3 S Decatur	13	1515EST			0	0			Hail (0.75)
La Porte County La Porte	14	1530EST			0	0	10K		Thunderstorm Wind
			Trees and a roof were damaged by fallen trees.						
White County Wolcott	14	1531EST			0	0	0		Thunderstorm Wind
			Trees down.						
White County Wolcott	14	1535EST			0	0	10K		Thunderstorm Wind
			Roof blown off of a restaurant.						
Starke County Hamlet	14	1555EST			0	0	0		Thunderstorm Wind
			Trees down.						
La Porte County La Porte	14	1600EST			0	0	0		Thunderstorm Wind
			Trees down countywide.						
Marshall County Plymouth	14	1600EST			0	0	0		Thunderstorm Wind
			Trees and power lines down countywide.						
Pulaski County 1 N Beardstown	14	1610EST			0	0	0		Thunderstorm Wind
			Trees down.						
Marshall County 6 N Culver	14	1613EST			0	0	0		Thunderstorm Wind
			Large tree down.						
Cass County Lewisburg	14	1615EST			0	0	0		Thunderstorm Wind

Storm Data and Unusual Weather Phenomena

June 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
INDIANA, Northeast									
									Trees down.
St. Joseph County									
5 S South Bend	14	1615EST			0	0	0		Thunderstorm Wind
									Trees down.
Fulton County									
Rochester	14	1620EST			0	0	0		Thunderstorm Wind
									Trees down.
Miami County									
Peru	14	1635EST			0	0	0		Thunderstorm Wind
									Tree downed against a house. Minor damage.
Elkhart County									
Elkhart	14	1640EST			0	0	0		Thunderstorm Wind
									Trees down.
Miami County									
Gilead	14	1640EST			0	0	0		Thunderstorm Wind
									Tree down.
Cass County									
Twelve Mile	14	1657EST			0	0	5K		Thunderstorm Wind
									Barn roof off near Twelve Mile and several trees down throughout the county.
Wabash County									
5 W North Manchester to 2 NW North Manchester	14	1702EST 1707EST	2	60	0	0	100K	10K	Tornado (F1)
									The initial tornado touchdown occurred near the intersection of SR 15 and 114. Two barns were deroofed and a grain silo was partially blown down. Several trees and limbs were taken down. The tornado lifted briefly as it crossed SR 15. It then continued on the ground for one half mile before striking another farm just west of the intersection of SR 114 and 400 W. A barn roof was blown off, and several trees and power lines were taken down. Crop damage was noted in an adjacent field. The tornado then lifted until it touched down about 1 mile to the northeast.
Wabash County									
2 N North Manchester	14	1705EST			0	0	50K		Thunderstorm Wind
									Barn destroyed and windows blown out of a brick house.
Wabash County									
2 NW North Manchester to 3 N North Manchester	14	1707EST 1712EST	4	200	0	3	700K	30K	Tornado (F2)
									The tornado touched down again, hitting a farm at 1300 N and 100 W. A man suffered a broken leg here. Two hog sheds and a large grain bin were destroyed. A 200-yard swath of trees were uprooted to the northeast along the railroad tracks. Another man suffered back and chest injuries as the tornado continued to the intersection of 1300 N and Meridian Road and demolished the barn in which he stood. A 5th wheel camper was rolled 50 yards from its original position destroying it. The tornado continued to the next farm just south of 1400 N and 100 E. The barn was destroyed and the house suffered moderate damage, primarily from flying tree debris. The tornado snapped a utility pole, which fell on an 18-year-old boy, breaking his leg. Many trees and power lines were downed along the way. From here, the tornado continued until the Wabash/Kosciusko county line.
Whitley County									
3 W Columbia City	14	1710EST			0	0			Hail (1.75)
Kosciusko County									
5 SSW Sidney to 4 S Sidney	14	1712EST 1715EST	1	100	0	0	200K	10K	Tornado (F2)

Storm Data and Unusual Weather Phenomena

June 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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INDIANA, Northeast



This series of pictures was taken at the Blocker residence just north of the Wabash/Kosciusko county line. Damage to the farmstead was severe but the farm house was luckily spared. Damage was estimated to be in excess of \$100,000.

The last farm was hit when the tornado was located just west of 1300 S and 400 E in Kosciusko County. Two barns, a garage, and several outbuildings were completely destroyed with some of the foundations swept clean. The house and two cars were severely damaged from large pieces of flying debris. A 17 foot boat was thrown about 20 yards and severely damaged. Most of the trees on this farm were destroyed. Debris from this farm was carried up to one half mile away as the tornado crossed 400 E and then lifted back into the clouds.

Whitley County Countywide	14	1715EST 1745EST			0	0	100K		Thunderstorm Wind
Many barns and few homes damaged. Several trees and power lines down.									
Whitley County Larwill	14	1715EST			0	0			Hail (1.00)
Whitley County 2 NE Larwill	14	1725EST			0	0			Hail (1.75)
Whitley County 3 W Columbia City	14	1730EST			0	0			Hail (1.75)
Whitley County 2 NW Columbia City	14	1733EST			0	0			Hail (0.75)
Whitley County Tri Lakes	14	1736EST			0	0			Hail (0.75)
Grant County Jalapa	14	1745EST			0	0	0		Thunderstorm Wind
Trees down.									
Whitley County Churubusco	14	1745EST			0	0	0		Thunderstorm Wind
Siding torn off of a garage. Trees down.									
Noble County 5 S Albion	14	1748EST			0	0			Hail (0.75)
Allen County Ft Wayne	14	1759EST			0	0	0		Thunderstorm Wind
Several trees down.									
Allen County Huntertown	14	1800EST			0	0	0		Thunderstorm Wind
Trees down.									
De Kalb County 1 SW Butler Center to 1 SE Butler Center	14	1800EST 1806EST	3	400	0	0	200K		Tornado (F2)

The tornado touched down on CR 64, one half mile west of Indian Springs Camp Ground. Trees and power lines were knocked down and many were snapped and uprooted. Extensive roof damage occurred to houses in the area. A barn was damaged with much of its roof torn off and outbuildings were either damaged or destroyed. The tornado then lifted back into its parent cloud.

Storm Data and Unusual Weather Phenomena

June 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Killed	Persons Injured	Estimated Damage Property	Crops	Character of Storm
INDIANA, Northeast									
Noble County									
Avilla	14	1800EST			0	0			Hail (0.75)
De Kalb County									
1 ESE Butler Center to 1 E Butler Center	14	1806EST 1810EST	1	250	0	0	300K	10K	Tornado (F1)
Once the previous tornado lifted up into the clouds, the thunderstorm cell moved northeast when this second tornado touched down and followed a skipping path near CR 60. The tornado reached the ground about 3 times. The tornado touched down first in a forested area and knocked down many trees. It then lifted and dropped down again in a residential area about a quarter mile away. There was much damage to houses and barns. A window was broken and a downspout torn off of a house. A satellite dish was twisted and bent while a television antenna was knocked off of a roof. Several trees were snapped and knocked onto power lines before the tornado lifted. It touched down a third time less than a quarter mile away. Trees were knocked down; two of them fell on automobiles. Damage was also seen in fields with corn plants being bent or uprooted. The tornado then lifted back up into the clouds.									
Allen County									
(Fwa)Baer Fld Ft Way	14	1809EST			0	0			Thunderstorm Wind (G51)
Allen County									
Ft Wayne	14	1809EST			0	0	0		Thunderstorm Wind
Tree down; minor house damage.									
Huntington County									
1 S Goblesville	14	1810EST			0	0	0		Thunderstorm Wind
Several trees down.									
Allen County									
Ft Wayne	14	1812EST			0	0			Hail (0.75)
Allen County									
10 W Ft Wayne	14	1815EST			0	0	100K		Thunderstorm Wind
More than 100 trees downed at Sycamore Hills Golf Club.									
Blackford County									
Hartford City	14	1815EST			0	0	0		Thunderstorm Wind
Trees and power lines down.									
De Kalb County									
1 SW Garrett	14	1820EST			0	0			Hail (1.00)
De Kalb County									
1 S Garrett	14	1825EST			0	0	0		Thunderstorm Wind
Several trees down.									
Wells County									
Bluffton	14	1825EST			0	0	40K		Thunderstorm Wind
A new house, which had undergone two months of construction, was destroyed.									
De Kalb County									
Butler	14	1838EST			0	0			Hail (0.75)

Synoptic and mesoscale conditions for June 14th...

A significant mid-level shortwave trough was located over Iowa on the morning of June 14th with an outflow dominated squall line across western Illinois. Rapid destabilization ensued later in the morning across eastern Illinois and northern Indiana with CAPES to 3500 j/kg by early afternoon. VAD wind profiles showed 850 millibar winds in excess of 50 knots in advance of the upper trough by afternoon and as storms developed along the left over outflow boundary across Illinois... they quickly became severe and organized into a large bow echo and moved quickly eastward into northern Indiana causing extensive wind damage. By late afternoon... a short segmented squall line developed just ahead of this bow echo squall line and extended from a St. Joseph to Fulton county line. Along the southern end of this line... an embedded mesocyclone developed and interacted with a left over storm-scale outflow boundary to produce the Wabash/Kosciusko and DeKalb county tornadoes. The lack of significant low level shear likely prevented a much larger and more widespread tornado event especially across Whitley and Allen counties where several funnel clouds were captured on film but failed to touch down.

Storm Data and Unusual Weather Phenomena

June 2000

June 2000									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
INDIANA, Northeast									
Starke County North Judson	20	1520EST			0	0			Thunderstorm Wind (G50)
Starke County Knox	20	1540EST			0	0	0		Thunderstorm Wind
		Tree blown down.							
Marshall County 5 W Plymouth	20	1552EST			0	0	0		Thunderstorm Wind
		Minor damage to siding of building.							
Marshall County 3 NW Plymouth	20	1600EST			0	0	0		Thunderstorm Wind
		Several trees down. Camper trailers blown over.							
Marshall County Plymouth	20	1600EST			0	0	0		Thunderstorm Wind
		Tree down.							
Fulton County Rochester	20	1618EST			0	0	2K		Thunderstorm Wind
		Tree down on car.							
Elkhart County 3 E Wakarusa	20	1620EST			0	0	0		Thunderstorm Wind
		Tree down.							
De Kalb County Butler	20	1800EST			0	0	0		Thunderstorm Wind
		Several trees and power lines down.							
INZ025	Huntington								
	24	2000EST			0	0		100K	Flood
		2300EST							

Hundreds of acres of soybeans and corn were lost due to excessive flooding throughout the entire county.

MICHIGAN, Extreme Southwest

Berrien County Niles	12	1500EST			0	0	0		Thunderstorm Wind
		Minor wind damage to the roofs of 4 buildings.							
St. Joseph County Countywide	12	1630EST			0	0	0		Thunderstorm Wind
		Trees down in northern part of county.							
Cass County Cassopolis	12	1645EST			0	0	0		Thunderstorm Wind
		Trees down.							
St. Joseph County Colon	12	1740EST			0	0	0		Thunderstorm Wind
		Trees and power lines downed. Minor damage to a grain bin.							
Branch County 6 N Bronson	12	1800EST			0	0	0		Thunderstorm Wind
		Roofs blown off two pole barns. Large grain bin moved 1/4 mile by wind. Trees down and some uprooted.							
Berrien County Stevensville	14	1407EST			0	0			Hail (1.25)

Storm Data and Unusual Weather Phenomena

June 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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MICHIGAN, Extreme Southwest

Berrien County
Coloma **14** **1445EST** **0** **0** **0** **Thunderstorm Wind**
Trees and power lines down. About 4,200 people lost power.

St. Joseph County
3 SW Three Rivers **14** **1710EST** **0** **0** **0** **Thunderstorm Wind**
Power lines and pole down. Trees down and some uprooted.

Berrien County
Countywide **14** **1800EST** **0** **0** **0** **Thunderstorm Wind**
About 5,400 people lost power due to fallen trees on power lines.

Branch County
Bronson **14** **1813EST** **0** **0** **0** **Thunderstorm Wind**
Trees and power lines down.
Synoptic and mesoscale conditions for June 14th...

A significant mid-level shortwave trough was located over Iowa on the morning of June 14th with an outflow dominated squall line across western Illinois. Rapid destabilization ensued later in the morning with CAPES to 3500 j/kg by early afternoon. VAD wind profiles showed 850 millibar winds in excess of 50 knots in advance of the upper trough by afternoon and as storms developed along the left over outflow boundary across Illinois... they quickly became severe and organized into a large bow echo and moved quickly eastward into northern Indiana and southern Michigan causing extensive wind damage.

OHIO, Northwest

Putnam County
1 NW Pandora **12** **1712EST** **0.8** **50** **0** **0** **40K** **Tornado (F1)**
Significant damage to a barn. Minor crop damage and six fruit trees blown down in same location.

Van Wert County
Convoy **14** **1340EST** **0** **0** **0** **Thunderstorm Wind**
Limbs and poles down.

Paulding County
2 S Paulding **14** **1345EST** **0** **0** **0** **Thunderstorm Wind**
Trees down.

Van Wert County
Van Wert **14** **1440EST** **0** **0** **10K** **Thunderstorm Wind**
Barn destroyed. Trees down.

Van Wert County
Van Wert **14** **1540EST** **0** **0** **Hail (0.75)**

Putnam County
3 N Leipsic **14** **1607EST** **0** **0** **0** **Thunderstorm Wind**
Power lines and poles down.

Williams County
Montpelier **14** **1840EST** **0** **0** **0** **Thunderstorm Wind**
Power lines down.

Defiance County
Defiance **14** **1845EST** **0** **0** **0** **Thunderstorm Wind**
One tree down.

Paulding County
Paulding **14** **1850EST** **0** **0** **10K** **Thunderstorm Wind**
Large tree limbs down. Damage to a house and car.

Fulton County
Wauseon **14** **1925EST** **0** **0** **0** **Thunderstorm Wind**
One tree down.

Storm Data and Unusual Weather Phenomena

June 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

OHIO, Northwest

Synoptic and mesoscale conditions for June 14th...

A significant mid-level shortwave trough was located over Iowa on the morning of June 14th with an outflow dominated squall line across western Illinois. VAD wind profiles showed 850 millibar winds in excess of 50 knots in advance of the upper trough by afternoon and as storms developed along the left over outflow boundary across Illinois... they quickly became severe and organized into a large bow echo and moved quickly eastward across northern Indiana and southern Michigan eventually reaching northwest Ohio by late afternoon and caused extensive wind damage.

Putnam County Ottawa

20 2010EST 0 0 Hail (1.50)

Putnam County Ottawa

20 2010EST 0 0 0 Thunderstorm Wind
Several trees down.

Storm Data and Unusual Weather Phenomena

July 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Killed	Number of Persons Injured	Estimated Damage Property	Crops	Character of Storm
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INDIANA, Northeast

De Kalb County Corunna

09 1938EST 0.1 30 0 0 50K Tornado (F1)

This tornado was the first of two weak tornadoes that formed from the same storm. The first touchdown occurred at SR327 and CR16 in the western part of the county. A mobile home was blown off its foundation and completely destroyed. A garage/shed to the northwest of this home sustained damage to the roof and the garage door was ripped off and left inside the garage.

De Kalb County Sedan

09 1945EST 0.1 50 0 0 5K Tornado (F0)

This second tornado touched down just west of Sedan on US HWY6. Damage at this location consisted of large tree branches being torn off trees and a few small trees being blown over. A garage made of concrete blocks was shifted off its foundation to the southwest a couple of inches. The roof was also peeled off of a small house at CR19 and US6.

Pulaski County Medaryville

09 2100EST 0 0 0 Thunderstorm Wind
Numerous trees down. Minor home damage.

Pulaski County Pulaski

09 2230EST 0 0 0 Thunderstorm Wind
Trees down. Row of pine trees broken off.

INZ022

Cass
09 2300EST 0 0 0 Flood
Minor flooding. Water covering roads CR300N and HWY17.

La Porte County Kingsbury

14 0435EST 0 0 0 Thunderstorm Wind
Trees down.

Steuben County Crooked Lake

28 1435EST 0 0 Hail (1.75)

Noble County Kendallville

28 1500EST 0 0 0 Thunderstorm Wind
Tree limbs down.

Noble County 2 E Avilla

28 1507EST 0 0 Hail (1.25)

Elkhart County Middlebury

28 1510EST 0 0 0 Thunderstorm Wind
Power lines downed.

De Kalb County Auburn

28 1535EST 0 0 0 Thunderstorm Wind
Trees down.

MICHIGAN, Extreme Southwest

Hillsdale County Jerome

28 1446EST 0 0 Hail (1.75)

Cass County Edwardsburg

28 1505EST 0 0 Hail (1.00)

Hillsdale County Litchfield

28 1507EST 0 0 0 Thunderstorm Wind
An 8 inch diameter tree down.

Hillsdale County Hillsdale

28 1510EST 0 0 0 Thunderstorm Wind
Tree limbs down.

Storm Data and Unusual Weather Phenomena

July 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

OHIO, Northwest

Putnam County									
Pandora	14	1140EST			0	0			Hail (0.75)
Putnam County									
Pandora	14	1145EST			0	0			Hail (1.00)
Defiance County									
Defiance	28	1215EST			0	0			Hail (0.75)

Storm Data and Unusual Weather Phenomena

August 2000

August 2000									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>INDIANA, Northeast</u>									
Kosciusko County 2 N North Webster	02	1655EST			0	0			Hail (0.75)
Steuben County Fremont	02	1659EST			0	0			Hail (0.75)
Kosciusko County 2 SE Syracuse	02	1703EST			0	0			Hail (0.75)
Kosciusko County 2 SE Syracuse	02	1703EST Tree down.			0	0	0		Thunderstorm Wind
Noble County Ligonier	02	1709EST			0	0			Hail (0.75)
Adams County Preble	02	1750EST			0	0			Hail (0.75)
Adams County 3 N Decatur	02	1758EST			0	0			Hail (0.75)
Grant County Swayzee	02	1759EST			0	0			Hail (0.75)
Grant County Swayzee	02	1802EST			0	0			Hail (0.75)
Grant County Swayzee	02	1808EST			0	0			Hail (0.75)
Wells County Bluffton	02	1823EST			0	0			Hail (0.75)
Jay County Dunkirk	02	1918EST			0	0			Hail (1.00)
Whitley County Tri Lakes	02	2005EST			0	0			Hail (1.00)
Whitley County Churubusco	02	2010EST			0	0			Hail (0.75)
Allen County 3 NE Ft Wayne	02	2050EST Many large tree limbs down.			0	0	0		Thunderstorm Wind
Noble County Rome City	06	1740EST Large trees down. Large shed destroyed.			0	0	5K		Thunderstorm Wind
Noble County 3 N Kendallville	06	1745EST Large limbs down.			0	0	0		Thunderstorm Wind
Lagrange County Lagrange	06	1810EST			0	0			Thunderstorm Wind (G52)
Pulaski County 2 N Winamac	06	1810EST Trees down.			0	0	0		Thunderstorm Wind
Starke County Starke Co Arpt	06	1810EST Trees down.			0	0	0		Thunderstorm Wind

Storm Data and Unusual Weather Phenomena

August 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
INDIANA, Northeast									
La Porte County La Porte	06	1816EST			0	0	0		Thunderstorm Wind
		Trees down.							
Marshall County 4 W Plymouth	06	1819EST			0	0			Thunderstorm Wind (G52)
Elkhart County 5 N Goshen	06	1820EST			0	0			Thunderstorm Wind (G52)
Fulton County Rochester	06	1845EST			0	0	0		Thunderstorm Wind
		Trees down.							
Elkhart County Nappanee	06	1847EST			0	0	0		Thunderstorm Wind
		Large trees down.							
St. Joseph County 2 S Mishawaka	06	1857EST			0	0	0		Thunderstorm Wind
		Trees down.							
Miami County 2 SW Macy	06	1859EST			0	0	0		Thunderstorm Wind
		Large tree limbs down.							
Marshall County 4 S Argos	06	1900EST			0	0	10K		Thunderstorm Wind
		Large shed destroyed.							
Kosciusko County Warsaw	06	1915EST			0	0	0		Thunderstorm Wind
		Trees down.							
Lagrange County Shipshewana	06	1920EST			0	0	0		Thunderstorm Wind
		Trees down.							
Steuben County Countywide	06	1920EST			0	0	0		Thunderstorm Wind
		Trees and power lines down.							
Wabash County North Manchester	06	1920EST			0	0	0		Thunderstorm Wind
		Power lines down. 2 large trees down.							
Whitley County Lorane	06	1920EST			0	0	0		Thunderstorm Wind
		Trees down.							
Whitley County Columbia City	06	1930EST			0	0	0		Thunderstorm Wind
		Large tree down.							
De Kalb County Countywide	06	1940EST			0	0	0		Thunderstorm Wind
		Trees and power lines down.							
Allen County Grabill	06	1945EST			0	0	0		Thunderstorm Wind
		Trees down.							
Noble County Albion	06	1945EST			0	0	0		Thunderstorm Wind
		Trees and power lines down.							

Storm Data and Unusual Weather Phenomena

August 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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INDIANA, Northeast

Synoptic and mesoscale conditions for August 6th...

A significant shortwave trough of low pressure combined with a mid level speed max of 60 knots and rapid prefrontal destabilization during the day of August 6th ahead of a strong cold front led to convective initiation across eastern Iowa by late morning. Given favorable deep layer shear of 50 knots and extreme instability present from Northern Illinois into Northwest Ohio that afternoon... storms quickly organized into a bow echo squall line as they rapidly moved eastward at speeds of up to 50 knots. As the bow echo matured... dramatic yet elevated rear inflow jet developed along the backside with isolated wind damage along and west of a Elkhart to Wabash line. However, with time the rear inflow jet descended causing widespread wind damage across Whitley, Noble and Allen counties.

White County Monticello	09	0640EST			0	0	0		Thunderstorm Wind
Numerous trees down and power lines down.									
Miami County 2 NW Peru	09	1012EST			0	0			Hail (0.75)
Steuben County Pleasant Lake	23	1317EST			0	0			Hail (0.75)
Fulton County 3 N Kewanna	23	1720EST			0	0			Hail (0.75)
Fulton County 3 N Kewanna	23	1740EST			0	0			Hail (0.75)
Fulton County Kewanna	23	1744EST			0	0			Hail (1.75)
Lagrange County 5 W Elmira	26	1600EST			0	0	0		Thunderstorm Wind
Trees blown down across eastern Lagrange county.									
Steuben County Orland	26	1625EST			0	0	0		Thunderstorm Wind
Several large trees blown down taking power lines down as well.									
Steuben County Pleasant Lake	26	1625EST			0	0			Hail (0.75)

MICHIGAN, Extreme Southwest

Berrien County Stevensville	06	1840EST			0	0	0		Thunderstorm Wind
Large limbs down.									
Berrien County 1 N Baroda	06	1926EST			0	0	0		Thunderstorm Wind
Large limbs down. Tree down.									
Hillsdale County 2 W Somerset Center	26	1735EST			0	0	0		Thunderstorm Wind
Several trees blown down. Windows blown out of a mobile home.									
Hillsdale County Camden	26	2009EST			0	0	0		Thunderstorm Wind
Numerous trees down throughout town.									

OHIO, Northwest

Henry County Napoleon	02	1735EST			0	0	0		Thunderstorm Wind
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Storm Data and Unusual Weather Phenomena

August 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
<u>OHIO, Northwest</u>									
			Power lines down.						
Williams County 1 S Pioneer	02	1735EST			0	0			Thunderstorm Wind (G50)
Fulton County Swanton	02	1830EST			0	0			Hail (0.75)
Henry County Liberty Center	02	1835EST			0	0			Hail (1.75)
Henry County Liberty Center	02	1835EST			0	0			Thunderstorm Wind (G52)
			Large tree limbs down.						
Paulding County Briceton	02	1844EST			0	0			Hail (1.00)
Henry County 3 NNE Holgate	02	1855EST			0	0			Hail (0.75)
Putnam County Kalida	02	1915EST			0	0			Hail (1.75)
Williams County Countywide	06	1910EST			0	0	0		Thunderstorm Wind
			Trees and power lines down.						
Defiance County Defiance	06	1940EST			0	0	0		Thunderstorm Wind
			Trees down.						
Fulton County 2 SE Delta to 2 S Delta	06	2000EST			0	0	10K		Thunderstorm Wind
			Roof off of building.						
Defiance County 4 S Defiance	06	2002EST			0	0	50K		Thunderstorm Wind
			Several barns destroyed.						
Paulding County Countywide	06	2010EST			0	0	0		Thunderstorm Wind
			Trees and power lines down.						
Paulding County Melrose	06	2010EST			0	0	10K		Thunderstorm Wind
			Metal roof blown off barn and into a house.						
Paulding County 7 N Oakwood	06	2010EST			0	1	10K		Thunderstorm Wind
			Mobile home blown over.						
Putnam County Dupont	06	2014EST			0	0	0		Thunderstorm Wind
			Large trees down.						
Putnam County Continental	06	2015EST			0	0	0		Thunderstorm Wind
			Large trees down.						
Putnam County Continental	06	2020EST			0	0			Thunderstorm Wind (G60)
Van Wert County Scott	06	2025EST			0	0	0		Thunderstorm Wind

Storm Data and Unusual Weather Phenomena

August 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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OHIO, Northwest

Trees down.

Putnam County Ottawa	06	2026EST			0	0	0		Thunderstorm Wind
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Trees down.

Putnam County Leipsic	06	2027EST			0	0	10K		Thunderstorm Wind
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Large trees down. Metal roof blown off of a warehouse.

Putnam County 2 N Columbus Grove	06	2035EST			0	0			Hail (0.75)
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Henry County Countywide	06	2037EST			0	0	0		Thunderstorm Wind
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Trees and power lines down.

Allen County 7 W Lima	06	2044EST			0	0	0		Thunderstorm Wind
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Trees and power lines down.

Allen County Slabtown	06	2044EST			0	0	0		Thunderstorm Wind
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Trees and power lines down.

Synoptic and mesoscale conditions for August 6th...

A significant shortwave trough of low pressure combined with a mid level speed max of 60 knots and rapid prefrontal destabilization during the day of August 6th ahead of a strong cold front led to convective initiation across eastern Iowa by late morning. Given favorable deep layer shear of 50 knots and extreme instability present from Northern Illinois into Northwest Ohio that afternoon... storms quickly organized into a bow echo squall line as they rapidly moved eastward at speeds of up to 50 knots. As the bow echo matured... dramatic yet elevated rear inflow jet developed along the backside with isolated wind damage along and west of a Elkhart to Wabash line. However, with time the rear inflow jet descended causing widespread wind damage across Paulding, Defiance, Henry and Putnam counties.

Williams County Edon	23	1351EST			0	0			Hail (0.75)
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Storm Data and Unusual Weather Phenomena

September 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
INDIANA, Northeast									
White County Reynolds	03	2145EST			0	0			Hail (0.88)
White County Reynolds	03	2145EST			0	0			Thunderstorm Wind (G51) ^M
Miami County 2 W Peru	03	2250EST			0	0	0		Thunderstorm Wind
		Tree blown down on Highway 24.							
Lagrange County Shipshewana	11	1455EST			0	0	0		Thunderstorm Wind
		Trees down.							
Lagrange County 2 E Brighton	11	1510EST			0	0	0		Thunderstorm Wind
		Power lines downed.							
Lagrange County Lagrange	11	1515EST			0	0	0		Thunderstorm Wind
		Trees down.							
Elkhart County Countywide	11	1530EST			0	0	0		Thunderstorm Wind
		Numerous trees and power lines down.							
Steuben County Angola	11	1545EST			0	0	0		Thunderstorm Wind
		Trees and power lines down.							
Steuben County Countywide	11	1600EST			0	0	0		Thunderstorm Wind
		Numerous trees and power lines down across the county.							
Kosciusko County Syracuse	11	1602EST			0	0	0		Thunderstorm Wind
		Large limbs blown down.							
Noble County Countywide	11	1605EST			0	0	0		Thunderstorm Wind
		Numerous trees and power lines down.							
Kosciusko County Milford	11	1620EST			0	0			Hail (0.75)
Marshall County 3 W Plymouth	11	1705EST			0	0	0		Thunderstorm Wind
		Several trees down.							
Fulton County Countywide	11	1719EST			0	0	0		Thunderstorm Wind
		200 miles of power lines were pulled down or damaged from fallen tree limbs across the county.							
Marshall County Countywide	11	1725EST			0	0	150K		Thunderstorm Wind
		Numerous trees and power lines downed.							
Kosciusko County 6 E Warsaw	11	1730EST			0	0	150K		Lightning
		Lightning struck a barn causing a fire which gutted the barn and its contents.							
Kosciusko County 1 S Warsaw	11	1735EST			0	0			Hail (0.75)

Storm Data and Unusual Weather Phenomena

September 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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INDIANA, Northeast

INZ009-016>017	De Kalb - Kosciusko - Whitley								
	11 1800EST				0	0	400K		Flood
	2100EST								
	Widespread street and basement flooding. Between 4 and 5 inches of rainfall was reported in town. Several people were rescued from stranded vehicles in flood waters.								
Wabash County									
Wabash	11 1810EST				0	0	0		Thunderstorm Wind
	Numerous trees blown down.								
Whitley County									
Columbia City	11 1810EST				0	0	0		Thunderstorm Wind (G51)
Whitley County									
Columbia City	11 1820EST				0	0	0		Thunderstorm Wind
	Power pole snapped.								
Whitley County									
Columbia City	11 1820EST				0	0	0		Thunderstorm Wind
	Tree limbs and power lines down across town.								
Huntington County									
Huntington	11 1830EST				0	0	0		Thunderstorm Wind
	Trees down in town. One home suffered considerable damage to the roof and front porch when a large tree fell on it.								
Wabash County									
Countywide	11 1830EST				0	0	50K		Thunderstorm Wind
	Numerous trees and power lines reported down.								
Allen County									
Ft Wayne	11 1850EST				0	0	0		Thunderstorm Wind
	Large limbs down.								
Grant County									
Van Buren	20 1538EST				0	0	0		Thunderstorm Wind
	Power lines downed.								
Adams County									
Linn Grove	20 1620EST				0	0	0		Thunderstorm Wind
	Tree limbs and one tree blown down.								

OHIO, Northwest

Van Wert County									
2 N Ohio City	20 1645EST				0	0	0		Thunderstorm Wind
	Large tree blown down. Power lines down as well.								
Putnam County									
Kalida	20 1700EST				0	0	0		Thunderstorm Wind (G65)^M
Allen County									
Lima	20 1725EST				0	0	0		Thunderstorm Wind
	Large tree blown down.								
Allen County									
Beaverdam	20 1730EST				0	0	0		Thunderstorm Wind
	Trees blown down in town.								

Storm Data and Unusual Weather Phenomena

Time Path Path Number of Estimated October 2000

[illegible]

INDIANA, Northeast

Elkhart County Countywide

03	2230EST	0	0	50K	Thunderstorm Wind
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Scattered trees were blown down across the county. A large tree fell onto a car in Goshen heavily damaging it. Another large tree was downed across C.R. 12 blocking both lanes of travel. Two Stone Lake residences suffered major structural damage to their homes when a 150 foot Oak tree was felled in the storm. The first house had its roof smashed by a large limb while the second house had its entire back wall cave in when the rest of the tree fell onto it.

Storm Data and Unusual Weather Phenomena

									November 2000
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

INDIANA, Northeast

INZ004

St. Joseph

20 2100EST
21 1400EST

0 0 0

Heavy Snow

...Synoptic and mesoscale conditions for November 20th and 21st...

The first blast of arctic air across Lake Michigan herald the start of first lake effect snow event of the season across northwest Indiana by late afternoon on the 20th. By late evening...most locations from LaPorte to Elkhart reported heavy snow which continued into Tuesday morning. Some notable storm total snowfall reports included 12 inches at the South Bend Waste Water plant... 10 inches in New Carlisle... and 7 inches at the South Bend airport.

MICHIGAN, Extreme Southwest

MIZ077>079

Berrien - Cass - St. Joseph

20 2100EST
21 1400EST

0 0 0

Heavy Snow

...Synoptic and mesoscale conditions for November 20th and 21st...

The first blast of arctic air across Lake Michigan herald the start of first lake effect snow event of the season across southwest Michigan by late afternoon on the 20th. By late evening...most locations from Benton Harbor to Sturgis reported heavy snow which continued into Tuesday morning. Some notable storm total snowfall reports included 11 inches in Dowagiac... 10 inches in Niles... 9 in Benton Harbor and Union... and 8.5 inches in Three Rivers.

Storm Data and Unusual Weather Phenomena

December 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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INDIANA, Northeast

INZ003>008-012-014-016 La Porte - St. Joseph - Elkhart - Lagrange - Steuben - Noble - Starke - Marshall - Kosciusko

11	0800EST	0	0	0	Heavy Snow
12	1000EST				

...Synoptic and mesoscale conditions on December 11th...

An unseasonably cold arctic airmass spilling southward out of southern Canada on the 10th combined with a very strong upper level disturbance and upper level jet of 160 knots came together over the Midwest early on the 11th. Surface low pressure developed over Oklahoma early on the 11th and rapidly deepened as it lifted northeastward into central Indiana by late afternoon. Heavy snow developed quickly during the morning and mixed with some sleet at times due to the tremendous warm air advection out ahead of the intensifying system. Heavy snow continued into the early morning hours of the 12th with thunder snow reported at several locations in northwest Indiana and southwest Michigan within the mid level deformation zone of the upper low. As the surface low continued to intensify and pull out into Ohio during the night of the 11th...strong gradient winds developed creating near blizzard conditions over northwest Indiana and southwest Michigan and caused some damage to trees and power lines over northwest Ohio with wind gusts of 59 mph reported in Putnam Ohio and 56 mph in Lima Ohio. Some notable storm total snowfall reports included 16 inches in Cassopolis... 14 in Elkhart... 13.5 in Goshen... 12 in Niles, St. Joseph, Salem Center, and the South Bend airport... and 10 inches in Berrien Springs, Westville, Middlebury, Mishawaka, Union, and White Pigeon with 6 to 8 inches elsewhere.

INZ017>018-020-022>027-032>034 Whitley - Allen - White - Cass - Miami - Wabash - Huntington - Wells - Adams - Grant - Blackford - Jay

13	1200EST	0	0	0	Heavy Snow
14	0000EST				

...Synoptic and mesoscale conditions for December 13th...

Another in a series of strong upper level disturbances coming out of the southern plains combined with an intensifying upper jet over southern Canada led to another bout of heavy snow across part of Indiana and Northwest Ohio on the 13th. Although the surface low remained quite weak and the upper level system moved rather quickly... moisture was able to quickly advect northward out of the lower Mississippi valley as the low level jet intensified in response to increasing upper level divergence associated with the strong upper level jet over southern Canada. Snow developed around noon and quickly became heavy by mid afternoon and continued into late evening before tapering off. Some notable storm total snowfall reports included 8 inches at Grissom AFB... 7.4 in Young America... 7 in Defiance, Huntington, Monroeville, Portland, Bluffton, and Montpelier, and 6 in Marion, Columbus Grove, Fort Wayne, Hartford City, Monticello, Van Wert, Wabash, Wauseon, and Columbia City.

INZ006>008-015>018-022>024 Lagrange - Steuben - Noble - Fulton - Kosciusko - Whitley - Allen - Cass - Miami - Wabash

16	2300EST	0	0	0	Heavy Snow
17	0700EST				

...Synoptic and mesoscale conditions on December 17th...

The last in a series of strong upper level disturbances and associated upper level jet streaks moving northward out of the lower Mississippi valley combined with another arctic cold front dropping down out of southern Canada on the 17th. Developing surface low pressure along the advancing arctic front was initially quite weak...however as the strong upper level low ejected out of the mean long wave trough through the central US and two distinct upper jet streaks coupled...the surface low bombed as it moved northeast from Louisville Kentucky to Toledo Ohio late that evening. Very heavy snow developed within the developing mid level deformation zone due in part to considerable moisture wrapping westward in advance of the upper level low, increasing deep upward vertical motion as the jet streak coupling occurred and rapid intensification of the system in general. Several locations reported thunder snow with snowfall rates of 1 to 2 inches per hour for a 6 hour period during the early morning hours of the 17th. Some notable storm total snowfall reports included 10.5 inches in Lagrange... 9 in Sturgis and Albion, 8 in Warsaw and La Otto, 7 in Columbia City, Cromwell, Kendallville and Middlebury and 6 inches in Rochester, Royal Center, Logansport and Fort Wayne.

INZ003>006-008-012-014-016 La Porte - St. Joseph - Elkhart - Lagrange - Noble - Starke - Marshall - Kosciusko

18	1200EST	0	0	0	Heavy Snow
19	0000EST				

...Synoptic and mesoscale conditions for December 18th and 19th...

A strong upper jet streak combined with an intense mid-level shortwave trough were responsible for developing low pressure over southern Missouri the morning of the 18th. Heavy snow broke out across Iowa and Illinois early in the afternoon of the 18th. As the system strengthened and moved northeast...moderate to heavy developed over northern Indiana and southwest lower Michigan which continued into late evening.

As the low pulled off into Ontario Canada...strong northwest winds advecting in much colder air began to stream down along the long stream axis of Lake Michigan with multiple bands of lake effect snow developing the morning of the 19th. Due to the large temperature differences between the lake and 850 millibars and the development of a mesoscale low over the lake...an intense shore parallel lake effect snow band developed by late morning on the 19th. This band shifted slowly eastward during the day of the 19th

Storm Data and Unusual Weather Phenomena

December 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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INDIANA, Northeast

dropping 1 to 2 inches of snow per hour before it broke up and dissipated by late evening. General snowfall amounts with the synoptic system ranged from 2 to 5 inches with an additional 1 to as much as 8 inches of lake effect snow. Notable combined storm total snowfall amounts included 13 inches at Bridgman Michigan... 10 in Michigan City, Kingsbury, Elkhart and St. Joseph... 9 in Plymouth, LaPorte and Benton Harbor... 8 in Goshen and Cassopolis... 6 to 7 in Nappanee, South Bend, Warsaw, Middlebury, Mishawaka, Union and White Pigeon.

MICHIGAN, Extreme Southwest

MIZ077>081

Berrien - Cass - St. Joseph - Branch - Hillsdale

11 0800EST
12 1400EST

0 0 0

Heavy Snow

...Synoptic and mesoscale conditions on December 11th...

An unseasonably cold arctic airmass spilling southward out of southern Canada on the 10th combined with a very strong upper level disturbance and upper level jet of 160 knots came together over the Midwest early on the 11th. Surface low pressure developed over Oklahoma early on the 11th and rapidly deepened as it lifted northeastward into central Indiana by late afternoon. Heavy snow developed quickly during the morning and mixed with some sleet at times due to the tremendous warm air advection out ahead of the intensifying system. Heavy snow continued into the early morning hours of the 12th with thunder snow reported at several locations in northwest Indiana and southwest Michigan within the mid level deformation zone of the upper low. As the surface low continued to intensify and pull out into Ohio during the night of the 11th...strong gradient winds developed creating near blizzard conditions over northwest Indiana and southwest Michigan and caused some damage to trees and power lines over northwest Ohio with wind gusts of 59 mph reported in Putnam Ohio and 56 mph in Lima Ohio. Some notable storm total snowfall reports included 16 inches in Cassopolis... 14 in Elkhart... 13.5 in Goshen... 12 in Niles, St. Joseph, Salem Center, and the South Bend airport... and 10 inches in Berrien Springs, Westville, Middlebury, Mishawaka, Union, and White Pigeon.

MIZ079>080

St. Joseph - Branch

17 0000EST
0600EST

0 0 0

Heavy Snow

...Synoptic and mesoscale conditions on December 17th...

The last in a series of strong upper level disturbances and associated upper level jet streaks moving northward out of the lower Mississippi valley combined with another arctic cold front dropping down out of southern Canada on the 17th. Developing surface low pressure along the advancing arctic front was initially quite weak...however as the strong upper level low ejected out of the mean long wave trough through the central US and two distinct upper jet streaks coupled...the surface low bombed as it moved northeast from Louisville Kentucky to Toledo Ohio late that evening. Very heavy snow developed within the developing mid level deformation zone due in part to considerable moisture wrapping westward in advance of the upper level low, increasing deep upward vertical motion as the jet streak coupling occurred and rapid intensification of the system in general. Several locations reported thunder snow with snowfall rates of 1 to 2 inches per hour for a 6 hour period during the early morning hours of the 17th. Some notable storm total snowfall reports included 10.5 inches in Lagrange... 9 in Sturgis and Albion, 8 in Warsaw and La Otto, 7 in Columbia City, Cromwell, Kendallville and Middlebury and 6 inches in Rochester, Royal Center, Logansport and Fort Wayne.

MIZ077>079

Berrien - Cass - St. Joseph

18 1200EST
19 0000EST

0 0 0

Heavy Snow

...Synoptic and mesoscale conditions for December 18th and 19th...

A strong upper jet streak combined with an intense mid-level shortwave trough were responsible for developing low pressure over southern Missouri the morning of the 18th. Heavy snow broke out across Iowa and Illinois early in the afternoon of the 18th. As the system strengthened and moved northeast...moderate to heavy developed over northern Indiana and southwest lower Michigan which continued into late evening.

As the low pulled off into Ontario Canada...strong northwest winds advecting in much colder air began to stream down along the long stream axis of Lake Michigan with multiple bands of lake effect snow developing the morning of the 19th. Due to the large temperature differences between the lake and 850 millibars and the development of a mesoscale low over the lake...an intense shore parallel lake effect snow band developed by late morning on the 19th. This band shifted slowly eastward during the day of the 19th dropping 1 to 2 inches of snow per hour before it broke up and dissipated by late evening. General snowfall amounts with the synoptic system ranged from 2 to 5 inches with an additional 1 to as much as 8 inches of lake effect snow. Notable combined storm total snowfall amounts included 13 inches at Bridgman Michigan... 10 in Michigan City, Kingsbury, Elkhart and St. Joseph... 9 in Plymouth, LaPorte and Benton Harbor... 8 in Goshen and Cassopolis... 6 to 7 in Nappanee, South Bend, Warsaw, Middlebury, Mishawaka, Union and White Pigeon.

Storm Data and Unusual Weather Phenomena

December 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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OHIO, Northwest

OHZ015>016-024>025 Paulding - Putnam - Van Wert - Allen

11	2200EST	0	0	0	High Wind (G51)^M
12	0200EST				

...Synoptic and mesoscale conditions on December 11th and 12th...

An unseasonably cold arctic airmass spilling southward out of southern Canada on the 10th combined with a very strong upper level disturbance and upper level jet of 160 knots came together over the Midwest early on the 11th. Surface low pressure developed over Oklahoma early on the 11th and rapidly deepened as it lifted northeastward into central Indiana by late afternoon. A burst of heavy snow developed during the morning and quickly changed to heavy rain by late morning due to the tremendous warm air advection out ahead of the intensifying system. As the surface low continued to intensify and pull out into northern Ohio during the night of the 11th...strong gradient winds developed which caused some damage to trees and power lines over northwest Ohio with wind gusts of 59 mph reported in Putnam Ohio and 56 mph in Lima Ohio.

OHZ001>002-004>005-015>016-024>025 Williams - Fulton - Defiance - Henry - Paulding - Putnam - Van Wert - Allen

13	1400EST	0	0	0	Heavy Snow
14	0000EST				

...Synoptic and mesoscale conditions for December 13th...

Another in a series of strong upper level disturbances coming out of the southern plains combined with an intensifying upper jet over southern Canada led to another bout of heavy snow across part of Indiana and Northwest Ohio on the 13th. Although the surface low remained quite weak and the upper level system moved rather quickly... moisture was able to quickly advect northward out of the lower Mississippi valley as the low level jet intensified in response to increasing upper level divergence associated with the strong upper level jet over southern Canada. Snow developed around noon and quickly became heavy by mid afternoon and continued into late evening before tapering off. Some notable storm total snowfall reports included 8 inches at Grissom AFB... 7.4 in Young America... 7 in Defiance, Huntingtown, Monticello, Van Wert, Wabash, Wauseon, and Columbia City.